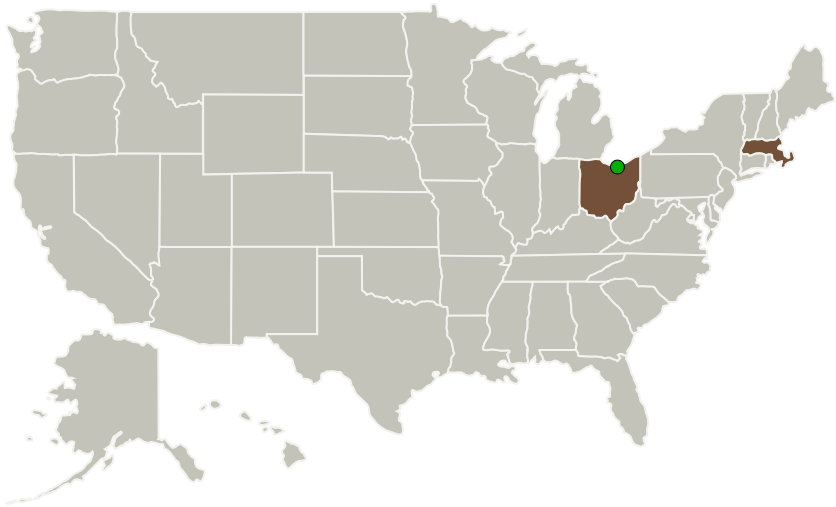
High Performance Monopropellants for Future Planetary Ascent Vehicles, Phase I

Completed Technology Project (2011 - 2011)

Project Introduction

Physical Sciences Inc. proposes to design, develop, and demonstrate, a novel high performance monopropellant for application in future planetary ascent vehicles. Our non-carcinogenic, non-cryogenic, monopropellants will significantly augment specific impulse and density specific impulse over conventional monopropellant and bi-propellant systems. In Phase I, the proposed investigation will focus upon characterizing critical thermal and chemical behavior of our monopropellants to ensure realistic system level design and maximum performance of future planetary ascent vehicles.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Physical Sciences, Inc.	Lead Organization	Industry	Andover, Massachusetts
Glenn Research Center(GRC)	Supporting Organization	NASA Center	Cleveland, Ohio

Primary U.S. Work Locations	
Massachusetts	Ohio

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Project Transitions

February 2011: Project Start

September 2011: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/138212)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Physical Sciences, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

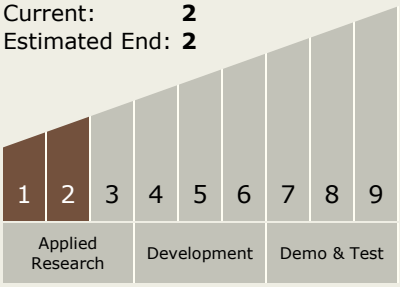
Carlos Torrez

Principal Investigator:

Allan Dokhan

Technology Maturity (TRL)

Start: **1**
Current: **2**
Estimated End: **2**



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Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.1 Remote Sensing Instruments/Sensors
    - TX08.1.3 Optical Components

Target Destinations

The Moon, Mars, Outside the Solar System, The Sun, Earth, Others Inside the Solar System